

WHAT IS CLAIMED IS:

1. A solid state image pickup device comprising:  
an image pickup unit including plural  
photoelectric conversion elements; and

5 a reference clock generation circuit for  
determining the timing of a drive pulse;

wherein said image pickup unit and said reference  
clock generation circuit are formed in a same  
semiconductor chip.

10 2. A solid state image pickup device according to  
claim 1, further comprising:

a drive pulse generation circuit for driving said  
image pickup unit;

15 wherein said drive pulse generation circuit is  
formed in said semiconductor chip.

20 3. A solid state image pickup device according to  
claim 1, wherein a preliminary control circuit for  
driving said image pickup unit in a predetermined  
preliminary operation mode is formed on said  
semiconductor chip.

25 4. A solid state image pickup device according to  
claim 2, wherein a preliminary control circuit for  
driving said image pickup unit in a predetermined  
preliminary operation mode is formed on said

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semiconductor chip.

5           5. A solid state image pickup device according to  
claim 3, wherein a switch for supplying the drive pulse  
generation circuit of said semiconductor chip  
selectively with a reference clock signal from said  
reference clock generation circuit incorporated in said  
semiconductor chip and a drive mode control clock  
signal from said preliminary control circuit, or a  
10 reference clock signal and a drive mode control clock  
signal from the exterior of said semiconductor chip, is  
formed on said semiconductor chip.

15           6. A solid state image pickup device according to  
claim 4, wherein a switch for supplying the drive pulse  
generation circuit of said semiconductor chip  
selectively with a reference clock signal from said  
reference clock generation circuit incorporated in said  
semiconductor chip and a drive mode control clock  
20 signal from said preliminary control circuit, or a  
reference clock signal and a drive mode control clock  
signal from the exterior of said semiconductor chip, is  
formed on said semiconductor chip.

25           7. A solid state image pickup device according to  
claim 3, wherein said device has a preliminary  
operation mode for operating said image pickup unit in

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synchronization with the reference clock signal and the preliminary operation control clock signal from said reference clock generation circuit and said preliminary operation control circuit integrated in said semiconductor chip, and a main operation mode for operating said image pickup unit in synchronization with the reference clock signal and the drive mode control clock signal from the exterior of said semiconductor chip, wherein the operation in said semiconductor chip is executed with a power consumption lower in said preliminary operation mode than in said main operation mode.

8. A solid state image pickup device according to claim 4, wherein said device has a preliminary operation mode for operating said image pickup unit in synchronization with the reference clock signal and the preliminary operation control clock signal from said reference clock generation circuit and said preliminary operation control circuit integrated in said semiconductor chip, and a main operation mode for operating said image pickup unit in synchronization with the reference clock signal and the drive mode control clock signal from the exterior of said semiconductor chip, wherein the operation in said semiconductor chip is executed with a power consumption lower in said preliminary operation mode than in said

main operation mode.

9. A solid state image pickup device provided  
with a solid state image pickup chip including an image  
pickup unit and a drive pulse generation circuit chip  
including a drive pulse generation circuit for driving  
said image pickup unit, wherein a reference clock  
generation circuit for determining the timing of the  
drive pulse is formed in said drive pulse generation  
circuit chip.

10. A solid state image pickup device according  
to claim 9, wherein a preliminary control circuit for  
driving said state image pickup chip in a predetermined  
drive mode is formed in said drive pulse generation  
circuit chip.

11. A solid state image pickup device according  
to claim 10, wherein a switch for supplying the drive  
pulse generation circuit of said semiconductor chip  
selectively with a reference clock signal from said  
basic clock generation circuit incorporated in said  
reference pulse generation circuit chip and a drive  
mode control clock signal from said preliminary control  
circuit, or a reference clock signal and a drive mode  
control clock signal from the exterior of said  
semiconductor chip, is formed on said drive pulse

generation circuit chip.

5 12. A solid state image pickup device according  
to claim 10, wherein said device has a preliminary  
operation mode for operating said image pickup unit in  
synchronization with the reference clock signal and the  
preliminary operation control clock signal from said  
reference clock generation circuit and said preliminary  
operation control circuit integrated in said drive  
10 pulse generation circuit chip, and a main operation  
mode for operating said image pickup unit in  
synchronization with the reference clock signal and the  
drive mode control clock signal from the exterior of  
said chip, wherein the operation in said chip is  
15 executed with a power consumption lower in said  
preliminary operation mode than in said main operation  
mode.

20 13. A solid state image pickup device  
comprising:

an image pickup unit including plural  
photoelectric conversion elements;

a drive pulse generation circuit for driving said  
image pickup unit;

25 a reference pulse generation circuit for  
determining the timing of a drive pulse;

a first control circuit for controlling the

operation mode of said drive pulse generation circuit;

a second control circuit for controlling the  
operation mode of said drive pulse generation circuit;  
and

5 a switch for connecting said first control circuit  
or said second control circuit to said drive pulse  
generation circuit.

10 14. A solid state image pickup device according  
to claim 13, wherein said switch is adapted to turn off  
the power supply to said first or second control  
circuit which is not connected to said drive pulse  
generation circuit.

15 15. A solid state image pickup device according  
to claim 13, wherein said first control circuit  
functions with a lower electric power consumption than  
in said second control circuit.

20 16. A solid state image pickup device according  
to claim 15, further comprising:

a signal processing unit for executing image  
processing on the signal from said image pickup unit;  
wherein said signal processing unit is controlled  
25 by said second control circuit.

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